



September 15, 2004

Dear Truck Owner/Operator:

FREE Software Upgrade for Your Truck !

The California Trucking Association (CTA) and the California Air Resources Board (ARB) are working together to get low oxides of nitrogen (NOx) engine software installed on every eligible, electronically-controlled engine registered in California **at NO COST!**

This software upgrade reduces NOx, which is an invisible gas that forms smog. Go to your dealer NOW and get your engine software upgraded for free!

The ARB recently approved a voluntary program for low NOx engine software installation in eligible 1993-1999 model year diesel vehicles at authorized California dealers. This is a joint program whose success relies on the participation of the engine manufacturers, dealers, the CTA, the ARB, and the owners of vehicles eligible for low NOx engine software upgrades.

More than 90,000 vehicles have already had the low NOx engine software installed nationwide with no significant change in driveability, safety, or fuel economy. Under the Voluntary Program in California, the low NOx engine software is available at no charge to the vehicle owner or operator. Authorized dealers will install the low NOx engine software for California registered vehicles free of charge upon your request. Additionally, CTA will be hosting press events where low NOx engine software will be installed (visit www.caltrux.org). In the future, engine manufacturers may or may not agree to pay for this software upgrade under a regulation, so we urge you to install low NOx software now. Under a regulation, truck owners that do not comply with this engine software upgrade will be subject to enforcement penalties. California needs the emission reductions from installing the low NOx engine software to reduce pollution and keep our federal highway funding.

Questions and Answers

How do I tell if my engines are affected?

Most 1993-1998 heavy-duty diesel engines are affected. Check the engine manufacturer and engine model in your truck if you have a 1993-1998 model year, electronically-controlled, engine. Compare your engine manufacturer and model with the attached List of Low NOx Rebuild Engines. If you find your engine on the list, low NOx engine software is available for your engine. Your service outlet may be contacted to determine whether or not your engine is eligible or has already been reprogrammed with low NOx engine software. Some 1998 model year engines are in 1999 model year vehicles.

What happens if I don't get the low NOx engine software installed on my vehicle?

If low NOx engine software is not installed on enough vehicles under the Voluntary Program, then you will be required to install low NOx software under a regulation. The low NOx software is available at no charge to the vehicle owner/operator under the Voluntary Program, but you may have to pay for it if the installation is required by regulation.

How will it affect my engine performance or fuel economy?

Manufacturers have stated that low NOx software will not affect the driveability or the safety of your vehicle. Several fleets have had the low NOx software installed prior to rebuild and have reported no noticeable differences in their fuel use. We expect the average fuel economy penalty, if any, to be below one percent.

How long will the installation of the low NOx engine software take?

The low NOx engine software takes about 15 to 30 minutes to install on your vehicle. You may need to allow additional time for driving to and from the authorized dealer facility. There may also be wait time, which could be reduced or eliminated by scheduling your visit.

How do I get the software installed?

Manufacturers have directed all their authorized dealers to install the low NOx software at no charge. Call your local, authorized dealer and make an appointment to get the low NOx software installed. If you have trouble locating a dealer that can install the software, call Staci Heaton at (916) 373-3553, at CTA, or Lisa Jennings at (916) 322-6913, at ARB, for help in locating an authorized dealer.

I have a 1993-1999 California-registered truck and I want to have Low NOx Software installed for free under the voluntary program. In the rare event my truck's ECM fails during installation, how likely is it that I will have to pay for it?

Very unlikely-engine manufacturers have agreed to cover the cost of the ECM replacements in most cases under the voluntary program. Customer neglect or damage is an example of a case where the manufacturers would probably choose not to cover the cost of an ECM replacement. Manufacturers reserve the right to determine which ECM replacements they will cover.

Most of the time Low NOx Software installation happens quickly and with no problems. In a small percent of cases, installation may not go smoothly. Sometimes this can be fixed by additional technical work. In a few cases there may be failure of the Engine Control Module (ECM) hardware, and the ECM may need to be replaced.

- **ECM failure are rare.** Based on a pilot incentive program in Sacramento, ECM failure only happened one half of one percent of the time - consistent with what one engine manufacturer reported for their nationwide technical support line.
- **Engine manufacturers have agreed to cover the cost in most cases.** If an ECM failure occurs during installation of Low NOx Software on a California-registered vehicle covered under the Voluntary Program, and dealers working with the appropriate technical support were unable to fix the problem, engine manufacturers have agreed to cover the cost of ECM replacement in most cases.
- **Most engine manufacturers and dealers have not been charging the customer. Detroit Diesel Corporation customers have been charged and reimbursed.** In the handful of failures that have occurred, most of the engine manufacturers and their dealers have not charged the customer. Owners of Detroit Diesel engines that have had a failed ECM during a voluntary software installation have been charged for the ECM and then reimbursed. Detroit Diesel Corporation has stated that they typically resolve such policy claims within 30 days. Charges for ECM replacement vary, but average around \$1500.

California Trucking Association

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California Air Resources Board

Contact: **Lisa Jennings**

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Low NOx engine software webpage:
www.arb.ca.gov/msprog/hdsoftware/hdsoftware.htm

Attachment

Low NOx Rebuild Engines (Electronically-Controlled)		
Make and Year	Engine Model	Notes
Caterpillar 1993 – 1998	3406E	Engine Serial Number (ESN) 5EK05767 through 5EK99381
Caterpillar 1993 – 1998	3406E	ESN: 6TS00097 through 6TS27803
Caterpillar 1993 – 1998	3406E	ESN: 1LW00001 through 1LW33262
Caterpillar 1993 – 1998	3406E	ESN: Reman 4AS00001 through 4AS00385
Caterpillar 1993 – 1998	3126	ESN: 1WM00210 through 1WM26819
Caterpillar 1993 – 1998	3126	ESN: 4ES000226 through 4ES00454
Caterpillar 1993 – 1998	3126	ESN: Reman 6RW00001 and up
Caterpillar 1993 – 1998	3126B	ESN: 7AS00001 through 7AS32636
Caterpillar 1993 – 1998	3116	ESN: 8WL00297 through 8WL07351
Caterpillar 1993 – 1998	3176B	ESN: 9CK00647 through 9CK32795
Caterpillar 1993 – 1998	3176B	ESN: Reman 3LZ00001 and up
Caterpillar 1993 – 1998	C-10	ESN: 2PN01000 through 2PN07278
Caterpillar 1993 – 1998	C-10	ESN: 8YS00449 through 8YS07060
Caterpillar 1993 – 1998	C-10	ESN: Reman AKB00001 and up
Caterpillar 1993 – 1998	C-12	ESN: 1YN01200 through 1YN12844
Caterpillar 1993 – 1998	C-12	ESN: 9NS00372 through 9NS19786
Caterpillar 1993 – 1998	C-12	ESN: Reman ALS00001 and up
Cummins 1993 – 1998	ISB	Critical Parts List Number (CPL) 2446 through 2451
Cummins 1993 – 1998	M11	CPL 1855, 1856, 1857, 2036, 2037, 2370, and 2371
Cummins 1993 – 1998	N14	CPL 1573, 1574, 1807, 1809, 1844, 1987, 2025, 2026, 2027, 2389, 2390, and 2391
Detroit Diesel Corp. 1994 – 1997	S60 6067-GK60	ESN 6R157655 through 6R472018
Detroit Diesel Corp. 1994 – 1997	S60 6067-GK28	ESN 6R157655 through 6R472018
Detroit Diesel Corp. 1998	S60 6067-TK60	ESN 6R157655 through 6R472018
Detroit Diesel Corp. 1998	S60 6067-TK28	ESN 6R157655 through 6R472018
Detroit Diesel Corp. 1998	S60 6067-PK60	ESN 6R157655 through 6R472018
Detroit Diesel Corp. 1998	S60 6067-PK28	ESN 6R157655 through 6R472018
Detroit Diesel Corp. 1994 – 1995	S60 6067-WK60	ESN 6R157655 through 6R472018
Detroit Diesel Corp. 1994 – 1995	S60 6067-WK28	ESN 6R157655 through 6R472018
Detroit Diesel Corp. 1996 – 1997	S60 6067-SK60	ESN 6R157655 through 6R472018
Detroit Diesel Corp. 1996 – 1997	S60 6067-SK28	ESN 6R157655 through 6R472018
Mack 1994 – 1998	EM7-275	ESN 4B through 8R
Mack 1994 – 1998	EM7-300	ESN 4B through 8R
Mack 1994 – 1998	E7-300	ESN 4B through 8R
Mack 1994 – 1998	E7-310/330	ESN 4B through 8R
Mack 1994 – 1998	E7-330/350	ESN 4B through 8R
Mack 1994 – 1998	E7-350	ESN 4B through 8R
Mack 1994 – 1998	E7-355/380	ESN 4B through 8R
Mack 1994 – 1998	E7-375	ESN 4B through 8R
Mack 1994 – 1998	E7-400	ESN 4B through 8R
Mack 1994 – 1998	E7-427	ESN 4B through 8R
Mack 1994 – 1998	E7-454	ESN 4B through 8R
Mack 1994 – 1998	E7-460	ESN 4B through 8R
Renault 1993 –1998	MIDR06.02.26	
Navistar/International 1998	DT 466E	Engine Family Number (EFN) WNVXH0466FNA
Navistar/International 1998	DT 466E	EFN: WNVXH0466CCB, WNVXH0466FNC
Navistar/International 1998	DT 466E	EFN: WNVXH0466CCD
Navistar/International 1998	530E	EFN: WNVXH0530FNA, WNVXH0530CCB

Low NOx Rebuild Engines (Electronically-Controlled)		
Navistar/International 1998	530E	EFN: WNVXH0530FNC, WNVXH0530CCD
Volvo 1994 – 1998	VE D12	Engine Family Name (EFNa) RVT12.EJDBRA
Volvo 1994 – 1998	VE D12	EFNa: SVT12.EJDBRA, TVT12.EJDBRA
Volvo 1994 – 1998	VE D12A	EFNa: VVT12.EJDBRA
Volvo 1994 – 1998	VE D12B-345 EPG	EFNa: WVTXH12.150S
Volvo 1994 – 1998	VE D12B-385 EPG	EFNa: WVTXH12.150S
Volvo 1994 – 1998	VE D12B-425 EPG	EFNa: WVTXH12.150S
Volvo 1994 – 1998	VE D12B-345 VEB	EFNa: WVTXH12.150S
Volvo 1994 – 1998	VE D12B-385 VEB	EFNa: WVTXH12.150S
Volvo 1994 – 1998	VE D12B-425 VEB	EFNa: WVTXH12.150S
Volvo 1994 – 1998	VE D7C-275	EFNa: WVTXH07.350S
Volvo 1994 – 1998	VE D7C-300	EFNa: WVTXH07.350S